100,000-member health care plan. **METHODS:** Patient characteristics and AED efficacy (decrease from baseline in frequency of drop seizures) were modeled with clinical trial data. Medical costs were derived from administrative claims data from a large US managed health care plan affiliated with OptumInsight, with the assumption that 2.3% of drop seizures required medical care. Budget impact was measured over 2 years. Results were expressed as overall difference in costs (seizure and pharmacy) to a health plan, and cost per member per month (PMPM) after the addition of clobazam. Alternative scenario analyses were performed. **RESULTS:** With the assumption that 0.04 % of the plan population had LGS, addition of clobazam to the formulary resulted in cost savings of $78,600 in Year 1 and $104,000 in Year 2, corresponding to savings of $0.07 and $0.09 PMPM, respectively. Alternative analyses with lower seizure rates upon discontinuation or greater long-term efficacy for lamotrigine and topiramate did not substantially alter the conclusion. Assumption that fewer drop seizures require medical care resulted in a modest cost increase with clobazam, suggesting that medically attended drop seizures are a primary driver of costs for LGS patients. **CONCLUSIONS:** Medically attended drop seizures are a major cost driver for LGS patients. Our results demonstrate that adding clobazam to a health care plan formulary can have a positive overall budget impact through a decrease in medical costs associated with drop seizures.

PND7

BUDGET IMPACT AND COST-EFFECTIVENESS OF ONCE-DAILY GABAPENTIN FOR THE TREATMENT OF POSTHERPETIC NEURALGIA

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OBJECTIVES: To develop a budget impact (BI) and cost-effectiveness (CE) model to determine the effect of introducing the recently approved once-daily gabapentin (Gralise™; G-QD) into the existing market of postherpetic neuralgia (PHN) treatments. **METHODS:** The BI model is based on estimated US. PHN incidence and captures treatment costs from initiation of PHN therapy through six months. Initial treatments included G-QD, gabapentin TID, and pregabalin. After assessment at 10 weeks, patients could remain on initial monotherapy, or add, switch, or discontinue PHN treatments. Post-assessment therapies also included lidocaine patch and opioids. Clinical and epidemiological data sources consisted of clinical trial data, US census data, and published literature. The US payer perspective model includes direct medical costs (in 2010 US dollars) including pharmacy, physician visits, and treatment of adverse events. Discounting was excluded due to the short timeframe. Drugs were priced at wholesale average cost (WAC). Other pricing factors were co-pays and rebates. Cost sources included proprietary standardized databases, Medicare fee schedules, and published literature. The CE analysis was based on a hypothetical 1000-patient cohort. Patients with and without pain reduction were determined from clinical trial data; outcomes were quality adjusted based on published PHN utility data for pain and adverse events. Costs were taken from the BI analysis. **RESULTS:** For 34,183 PHN patients, the addition of G-QD decreased the total cost budget by $12,230 (-0.04%). While the pharmacy budget increased by $299,547 (1.34%), the non-pharmacy budget decreased by $311,777 (-3.06%). In the CE analysis, the incremental cost per quality-adjusted life year was $31,257 for G-QD versus gabapentin TID, and G-QD dominated pregabalin. Sensitivity analysis demonstrated stable results. **CONCLUSIONS:** The budget impact of introducing G-QD to the market is small when considering only pharmacy costs, but may be cost saving when non-pharmacy costs are included. G-QD is cost-effective versus other initial PHN treatments.

PND8

POTENTIAL ECONOMIC BENEFITS OF PEGYLATION IN THE TREATMENT OF MULTIPLE SCLEROSIS: A SYSTEMATIC REVIEW OF THE PHARMACOECONOMIC LITERATURE

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OBJECTIVES: Polyethylene glycol-conjugated (PEGylated) therapies are commonly used to treat patients with anemia, neutropenia, and viral hepatitis. While no PEGylated drugs are currently approved for the treatment of multiple sclerosis (MS), a PEGylated formulation of interferon beta-1a is being developed for relapsing-remitting MS treatment. The goal of this study was to identify the economic benefits of PEGylated drugs currently available in other disease areas. **METHODS:** A comprehensive search of the medical literature was conducted using PubMed/MEDLINE, article links, and supplemental searches. Inclusion criteria included English language, publication date between 1985 and 2010, prospective or retrospective study design, and cost or cost-effectiveness studies comparing PEGylated drugs with their non-PEGylated counterparts in the same therapeutic area. All costs were adjusted to 2010 US dollars for reporting. **RESULTS:** Thirty-seven published articles reporting data from 11 countries in 12 therapeutic areas were reviewed, including studies on pegfilgrastim, liposomal PEGylated doxyrubicin, peginterferon alfa 2a and 2b, pegaspargase, and PEGylated epoetin. Twelve studies showed some cost offsets for 6 PEGylated drugs, with 4 of the drugs reducing administration costs. Other offset costs included those for adverse event treatment, disease complications, and inpatient/outpatient treatment. Nineteen of the 35 studies considering total treatment costs showed total cost savings with 3 of 5 PEGylated drugs, ranging up to $7743 per patients annually. With 4 PEGylated drugs, 17 of 18 studies reported incremental cost-effectiveness ratios below $50,000 per quality-adjusted life-year. **CONCLUSIONS:** PEGylated drugs are reported to reduce patient health resource use and costs, including costs associated with drug administration and adverse events. Since multiple studies have demonstrated that PEGylated drugs are more cost-effective than their non-PEGylated counterparts, PEGylated interferon beta-1a may offer similar economic benefits to payers and health care systems.

PND9

HUNTINGTON'S DISEASE (HD) DIRECT MEDICAL COSTS: A RETROSPECTIVE CLAIMS DATABASE ANALYSIS

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OBJECTIVES: Little US data are available on the costs of HD, a debilitating disease marked by motor/cognitive/psychiatric impairment worsening through distinct disease stages. Our study aimed to quantify the direct health care costs (and major cost drivers) among HD patients by disease stage in commercial (C) versus Medicaid (M) databases. **METHODS:** Health care utilization/cost data (pharmacy, outpatient, inpatient) were obtained for HD patients (ICD-9-CM 333.4) from Thomson Reuters' MarketScan M/C 2002-2009 databases. Patients were classified by disease stage (early/middle/late) via a hierarchical assessment of markers of disease severity, which was confirmed by literature review/key opinion leader input. Health care utilization/costs were measured over the follow-up time of each patient with total costs/patient/stage annualized using a patient-year cost approach. **RESULTS:** A total of 1272 HD patients (752/520 C/M) were included for this study. The mean age was similar between the two populations (C: 48.5 years (SD 13.3); M: 49.3 years (SD 17.2)) with slightly higher female representation in the M population (60.8% vs. 54.1%). A fairly even C patient distribution by stage was noted (30.5%/35.5%/34.0%; early/middle/late). However, most (74.0%) M HD patients were classified as late stage. The mean total annualized cost per patient varied in both populations (early: C - $4,947 (SD $6,040), M - $3,257 (SD, $5,670); middle: C - $15,066 (SD $21,722), M - $12,330 (SD $16,986); late: C - $22,582 (SD $39,028), M - $37,495 (SD $27,111)). Outpatient costs were the primary health care cost component, except for M early stage (outpatient: early: C – 45.8%; middle: C – 48.2%, M – 66.4%; late: C – 41.5%, M – 78.9%; inpatient: early: M - 37.7%). Nursing home costs contributed to 54.6% of M but only 4.6% of C total late stage costs. **CONCLUSIONS:** HD direct health care costs increased with disease progression. Late stage M patients had higher costs than their C counterparts, due to nursing home costs.

PND10

COST OF RELAPSE RESULTING IN HOSPITAL AND EMERGENCY ROOM VISITS AMONG PATIENTS WITH MULTIPLE SCLEROSIS

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OBJECTIVES: To describe diagnosis codes, frequency and cost of multiple sclerosis (MS)-related hospital and emergency room (ER) utilization. **METHODS:** Two cohorts of MS-diagnosed patients aged 18-64 years were selected from a national managed care database: 1) longitudinal cohort: patients with 12 months pre/post eligibility around first MS diagnosis occurring January 1, 2002 to July 30, 2010, and 2) cross-sectional cohort: patients with an MS diagnosis in 2010. MS-related [multiple sclerosis (ICD-9-CM=340.XX), other demyelinating CNS disease (ICD-9-CM=341.XX), and a group of symptom-related codes] hospitalizations and ER visits were evaluated. Rehabilitation (ICD-9-CM=V57.89) was included based on qualitative review of codes. Mean number and cost per patient, adjusted to $US 2010, were described. **RESULTS:** There were 31,905 patients in the longitudinal cohort and 32,845 patients in the cross-sectional cohort. In the longitudinal cohort, 18.5% had a post-index hospitalization (any cause) with 5.2% being MS-related (340.XX: 3.2%; 341.XX: 0.4%; rehabilitation: 0.8%; and symptom-related: 1.1%). Mean number and cost (SD) of an MS-related hospitalization were 1.19 (0.55) and $14,358 ($32,356), respectively. In addition, 31.4% of patients experienced a post-index ER visit with 6.9% being MS-related (340.XX: 2.9%; 341.XX: 0.2%; symptom-related: 4.7%). Mean number and cost (SD) of an MS-related ER visit were 1.23 (0.78) and $573 ($816), respectively. In the cross-sectional cohort, 12.5% had a hospitalization (any cause) with 3.7% being MS-related (340.XX: 2.1%; 341.XX: 0.2%; rehabilitation: 1.1%; and symptom-related: 0.7%). Mean number and cost (SD) of an MS-related hospitalization were 1.32 (0.78) and $16,213 ($25,394), respectively. In addition, 27.3% of patients experienced an ER visit with 6.4% being MS-related (340.XX: 2.6%; 341.XX: 0.1%; and symptom-related: 4.5%). Mean number and cost (SD) of an MS-related ER visit were 1.37 (0.89) and $682 ($825), respectively. **CONCLUSIONS:** Costs for hospitalization and ER visits among MS patients were substantial. Inclusion of rehabilitation and symptom-related codes can account for an under-recognized proportion of expenditures.

PND11

COST OF CERVICAL DYSTONIA IN THE UNITED STATES

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OBJECTIVES: Cervical dystonia (CD), or spasmodic torticollis (333.83), is the most common adult-onset focal dystonia and is associated with significant pain and disability. The quality of life burden of CD has been well documented; however, very limited information exists regarding the economic burden of CD. This study aims to quantify the average per-patient cost of CD health care resource use using baseline data from the CD Patient Registry for the Observation of OnabotulinumtoxinA Efficacy (CD PROBE), a large ongoing registry. **METHODS:** At baseline, participants reported use of specific health care resources over the preceding 6 months, including visits to a primary care provider, neurologist, physiatrist, physical or occupational therapist, neurosurgeon, alternative care provider, chiroprac-